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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/653,559	09/02/2003	Ronald F. Rykowski	40678-8002US	3217

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EXAMINER	
AMADIZ, RODNEY	
ART UNIT	**PAPER NUMBER**
2675	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/653,559	RYKOWSKI ET AL.	
	Examiner	Art Unit	
	Rodney Amadiz	2675	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 September 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *19 December 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *12/19/2003*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1-28are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of copending Application No. 10/653,559.

Claim 1 of This Application 10/455,146	Claim 1 of Application 10/653,559
A method for calibrating a visual display **sign**, the method comprising:	A method for calibrating a visual display, the method comprising:
(a) analyzing a visual display **sign**, the **sign** comprising an array of data points;	(a) analyzing a visual display **module**, the **module** comprising an array of data points;
(b) determining a color value and a brightness value for each data point;	(b) determining a color value and a brightness value for each data point;

(c) adjusting the color value and brightness value for each data point to correspond with a standard color value and a standard brightness value for a given color; and	(c) adjusting the color value and brightness value for each data point to correspond with a standard color value and a standard brightness value for a given color; and
(d) **recalibrating** the visual display **sign** with the adjusted data point values.	(d) **calibrating** the visual display **module** with the adjusted data point values.

Although the conflicting claims are not identical, they are not patentably distinct from each other. Note the comparison above; claim 1 of the instant application is not patentably distinct from claim 1 of the application 10/455,146. For example, claim 1 of the instant application differs from claim 1 of the application 10/455,146 only in that the term "sign" is used instead of "module". At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to calibrate a sign, a module or both to maximize the efficiency of the display device. Also there is no substantial difference between "calibrating" and "recalibrating", although the use of the word "recalibrating" is really not appropriate, as calibration has not been recited as being performed earlier.

Claims 8 and 9 of the instant application differs from claim 10 of application 10/455,146 in that calibration takes place in at an on-site location instead of a "test station" or "darkroom". At the time the invention was made, it would have been obvious

to a person of ordinary skill in the art to calibrate a sign, a module or both, at a test station, darkroom, on-site or any environment possible in order to obtain ideal conditions that would produce the best results.

Claims 23 and 24 of the instant application differs from claims 24 and 25 of Application 10/455,146 in that the lens includes optics necessary for long-range imaging. It is inherent that lens include optics for imaging. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to include a digital camera and lens with short-range imaging, long-range imaging or both to accurately capture and measure multiple display points on a displayed image for calibration.

In reference to the remaining claims rejected in the instant application, the limitations can be found in the claims of Application 10/455,146.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Objections

Claims 7 and 19 are objected to because of the following informalities: Both claims recite the term "recalibrating". Use of the word "recalibrating" is really not appropriate, as calibration has not been recited as being performed earlier.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1, 2, 5-11, 13-15, 17-22 and 25-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe et al. (4,825,201).

As to claims 1, 5 and 6, Watanabe et al. teaches a method for calibrating a visual display, the method comprising: (a) analyzing a visual display module (Fig. 5, note optical measuring device 12, which analyzes the display unit 1), the module comprising an array of data points (data points which lie inside the display units); (b) determining a color value and a brightness value for each data point (Col. 5, lines 40-44, and 53-55); (c) adjusting the color value and brightness value for each data point (Col. 5, lines 44-50, 55-59 and Col. 6, lines 16-21); (d) calibrating the visual display module with the adjusted data point values (Col. 5, lines 59-66). Note that the color value of the data point is equivalent to the chromaticity of the data point and the brightness value of the data point is equivalent to the luminance of the data point. Although Watanabe et al. adjusts the color value and brightness value for each data point, he doesn't implicitly state that the values are compared to standard color values and standard brightness values. However, in the background of the disclosure, Watanabe et al. teaches adjusting the picture elements red, blue and green in comparison with standard values (Col. 1, lines 34-38). At the time the invention was made, it would have been obvious to

a person of ordinary skill in the art to incorporate the principles of adjusting the color and brightness values to correspond with standard values as taught in the background of Watanabe et al. in the current visual display module taught by Watanabe et al. so that the panel as a whole would display in optimum condition (Col. 1, lines 47-50).

As to claims 10, 13-15, 22, 27 and 28 Watanabe et al. teaches a method and an apparatus for calibrating a visual display, the method comprising: (a) analyzing a portion of the display module (Fig. 5, note optical measuring device 12, which analyzes the display unit 1, also note Col. 5, lines 53-55, wherein portions are being analyzed one at a time), the portion comprising an array of data points (data points which lie inside the display units); (b) determining a color value and a brightness value for each data point within the array (Col. 5, lines 40-44, and 53-55); (c) storing the color value and brightness value for each data point (Col. 5, line 55, optical measuring device 12 stores the measurement); (d) repeating steps (a) to (c) for each portion of the visual display module until all portions of the visual display module have been analyzed (Col. 5, lines 53-55 and Col. 5, line 67- Col. 6, line 4); (e) after all of the data points have been read, calculating correction factors for each data point (Col. 5, lines 44-59); (f) applying the correction factors to each stored data point (Col. 5, lines 44-50, 55-59 and Col. 6, lines 16-21); and (g) calibrating the visual display module with the corrected data points (Col. 5, lines 59-66). Note that the color value of the data point is equivalent to the chromaticity of the data point and the brightness value of the data point is equivalent to the luminance of the data point. Also note that the data points are pixels of a liquid crystal display (Col. 1, lines 18-20). Although Watanabe et al. adjusts the color value

and brightness value for each data point, he doesn't implicitly state that the data points will display the same color values. However, in the background of the disclosure, Watanabe et al. teaches adjusting the picture elements red, blue and green in comparison with standard values (Col. 1, lines 34-38); therefore, each data point displays the same standard color value. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to incorporate the principles of adjusting the color and brightness values to correspond with standard values as taught in the background of Watanabe et al. in the current visual display module taught by Watanabe et al. so that the panel as a whole would display in optimum condition (Col. 1, lines 47-50).

As to claims 8, 9, 20 and 21, Watanabe et al. teaches a method for calibrating a visual display. Watanabe et al. however, does not limit where the method takes place. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to calibrate a module at a test station, darkroom or any environment with ideal conditions that would produce the best results.

As to claims 2 and 11, note the discussion of Watanabe et al. above. Watanabe et al. teaches a method for calibrating a visual display further comprising: setting the visual display module image to the color red (Col. 1, lines 34-38 and 44-47); repeating steps (a) to (c) (steps (a)-(f) for claim 10) (Col. 5, lines 67- Col. 6, lines 4); and repeating steps (e) and (f) (steps (h)-(i) for claim 10) with the visual display module image set to green and blue (Col. 1, lines 34-38 and 44-47 and Col. 5, lines 67- Col. 6, lines 4). It is inherent that white light is produced when you combine red, green and blue lights.

White light is used to determine the brightness of electronic displays. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to set the visual display module to red, green, blue and white in order to calibrate the display for color and brightness.

As to claim 17, Watanabe et al. teaches the method for calibrating a visual display wherein the process for storing the color value and brightness value for each data point comprises storing the data in a database (Fig. 3, E^2 Prom, Col. 4, lines 48-49).

As to claims 7, 18, 19, 25 and 26, Watanabe et al. teaches a method and an apparatus for calibrating a visual display wherein the process for calculating correction factors for each data point includes processing the data using a computer and a software (Fig. 6, note CPU 3 and ROM3). Watanabe et al. also teaches the process for recalibrating the visual display module further comprises uploading the corrected data points to firmware and/or software controlling the visual display (Fig. 6, ROM3 and Col. 6, lines 11-21). Finally, Watanabe et al. also teaches the interface (Figure 5, Correction-value Determining Device and Controller 8) coupled to both the capturing means (Optical Measuring Device 12) and the Visual Display (Display Unit 1).

5. Claims 3 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe et al. in view of Lutz et al. (US. Patent 6,704,989).

As to claims 3 and 12, note the discussion of Watanabe et al. above. Watanabe et al. teaches each of the display units holding a plurality of multi-color display panels

such as liquid crystals (Col. 1, lines 17-20). Watanabe et al. does not teach the data points to be light-emitting diodes nor does not limit the reference to only liquid crystal displays (note the words "such as"). Examiner cites Lutz et al. to teach electronic modules (Fig. 2, 14a and 14b) comprising light-emitting diodes as light sources (Col. 3, lines 37-43). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to interchange the light emitting diodes as taught in the Lutz et al. reference in place of the liquid crystal data points taught by Watanabe et al. because of their long term reliability and low power consumption.

6. Claims 4 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe et al. in view of (Jenkins et al. "Digital Imaging Colorimeter For Fast Measurement of Chromaticity Coordinate And Luminance Uniformity of Displays", herein referred to as "Jenkins").

As to claims 4 and 16, note the discussion of Watanabe et al. above. Watanabe et al. teaches all of the limitations of the claim including measuring the color value and brightness value with an optical measuring device (12). Watanabe et al. however, does not explicitly state that the optical measuring device is a colorimeter. Examiner cites Jenkins to teach a CCD photometer and colorimeter for determining the color value and brightness value for each data point (Introduction, lines 8-15). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to incorporate the CCD photometer and colorimeter as taught by Jenkins in the display

taught by Watanabe et al. in order to measure multiple test points on a display thus saving time.

7. Claims 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe et al. in view of Hsu (USPGPUB 2004/0179208).

As to claims 23 and 24, note the discussion of Watanabe et al. above. Watanabe et al. teaches an optical measuring device (Fig. 5, Reference Number 12) for capturing the image; however, Watanabe et al. does not teach the image-capturing device comprising a CCD (or CMOS) digital camera and lens. Examiner cites Hsu to teach an optical sensor (Fig. 2, Reference Numbers 3 and 4) composed of a CCD (or CMOS) digital camera (Page 1, ¶ 11). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to incorporate the CCD or CMOS digital camera as taught by Hsu in the capturing means taught by Watanabe et al. in order to accurately produce high-quality images.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Examiner cites the following references as pertinent to the disclosure due to their relevance in visual display devices.

Silsby	U.S. Patent 5,563,621
Greene et al.	U.S. Patent 6,020,868
Ikeda et al.	U.S. Patent 6,552,706

Firester et al. U.S. Patent 6,611,241

Van Zon USPGPUB 2003/0156073

Inquiries

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rodney Amadiz whose telephone number is (571) 272-7762. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sumati Lefkowitz can be reached on (571) 272-3638. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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